

Hitchcock's Machine Tool Blue Book

MAY, 1933

TWENTY-EIGHTH YEAR

THE HAND-EE GRINDER

Works on A. C. or D. C.
10,000 R. P. M.

PLUG in anywhere—at the bench or on the job—for all light grinding. Touch off, dress up, speed up, sharpen.

Ideal for sharpening all types of taps, dies, and thread chasers. Many other uses.

• Five Day Free Trial •

Order direct or from your suppliers. Three wheel shapes free. Money returned if not satisfactory after 5-days trial. Order today.

Chicago Wheel & Mfg. Co.
116 S. Aberdeen St., Chicago, Ill., U.S.A.



\$10.
Post Paid



PUBLISHED AT 508 So. DEARBORN ST. CHICAGO

COLLETS AND FEED FINGERS

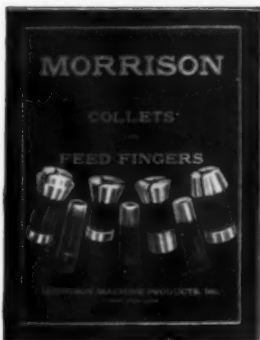


Collets for: American, Ames, Boye & Emmes, Burke, Carroll & Jamieson Chard, Cincinnati, Cisco, Dalton, Flather, Greaves-Klusman, Hamilton, Hendey, LeBlond, Monarch, Porter-Cable, Pratt & Whitney, Rahn-Larmon, Reed-Prentice, Rivett, Rockford, Sebastian, Seneca, Sidney, South Bend, Springfield, Stark, Sundstrand, Van Norman and our own Hardinge Categorical Lathes and Millers.

Lower Prices—Better Products

Collets, Feed Fingers, Master Collets, Master Feed Fingers and Pads for: Brown & Sharpe, Cleveland, Cone, Gridley, National Acme, New Britain, Davenport etc., Automatics.

Collets for: Bardons & Oliver, Cincinnati, Foster, Garvin, Pratt & Whitney, Warner & Swasey etc., Hand Screw Machines.



An association of two reliable organizations, combining sixty years of Collet and Feed Finger manufacturing experience. These catalogs are a complete reference for all of your Collet and Feed Finger requirements.

If you do not have a copy, address a letter to either company.

Hardinge Brothers, Inc., Elmira, New York
Morrison Machine Products, Inc., Elmira, N.Y.

Hitchcock's Machine Tool Blue Book

**Selected
Circulation**

**Over
25,000**

MAY, 1933

TWENTY-EIGHTH YEAR

The Medium for a Buyers' Market

There is a surfeit of metal-working machines for sale, and there will be for some time to come.

This means such sharp competition for sales that only those manufacturers who put forth the greatest and best-directed selling efforts will get a fair percentage of the orders placed.

And do not forget that sales and advertising must go hand in hand. It is only through the proper co-ordination of both that the best can be secured from either.

But advertising has such reduced acceptance during a buyers' market that when a manufacturer pays an exorbitant rate for publicity his profits are largely dissipated before they are made.

The Hitchcock publications are peculiarly adapted to meet this situation. By ignoring custom and precedent, which too often interfere with progress, they eliminate the non-essentials and furnish a broader advertising service at lower cost.

They enable the manufacturer of machine tools and kindred equipment to make his machines known to the responsible buyers the country over on the basis of strict economy for the effective service rendered.

Experimenting in your mechanical department often is a necessity. It might be more profitable right now to extend some of your experiments to advertising. If you will apply this idea and try out the "Blue Book" you may be most agreeably surprised.

But it's your move; the king-row is open.

Published By

Hitchcock Publishing Co.

508 S. Dearborn St.,

Chicago, Ill.

Consult the Classified Finding Index for your requirements

FOOTBURT



A Single Spindle Footburt Sipp Sensitive Drill

**Made in three
sizes of single
and multiple
spindle models**

More holes with this machine

Why? Because you can change speeds in two seconds or belts in ten seconds—because the automatic idlers keep the belt pulling to capacity at all times—because the full ball bearing equipment and accurate machining gives a smooth, fast cut.

Write for No. 650 Folders

The Foote-Burt Company, Cleveland, O.

FOOTBURT

NOC-OUT

Automatic Roll Feeds For Punch Presses Speed Production

Secure automatic feeding with its many advantages for your punch presses by installing the NOC-OUT Automatic Reversible Feed. This small unit automatically feeds metal, paper, brake lining or any other stock from coils in lengths from 0 to 30 inches per stroke of press.

FASTER — ACCURATE — ECONOMICAL

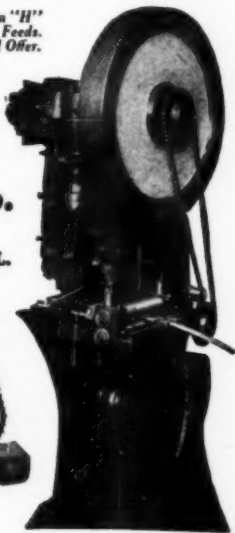
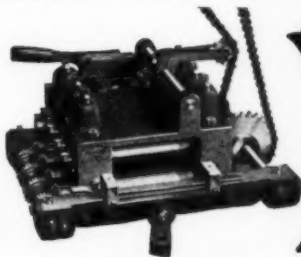
Labor is saved, production is increased and your men safeguarded with this feed. Automatic feeding means full speed production all day long —there are no "let downs" as it eliminates the human element whose energies are limited. Can be readily installed on any press.

We will gladly send you a copy of Bulletin "H" describing NOC-OUT Automatic Roll Feeds. Write for it and details of Our Free Trial Offer.

We design and build progressive and automatic dies for high speed production. Submit samples of your stamping for estimate.

Wittek Mfg. Co.

4309 W. 24th Place,
Dept. "H" CHICAGO, ILL.





We Can Supply Your Needs

We have complete facilities so that we can furnish your every requirement. Elco Screws are the choice of leading Industrial and Automotive concerns who demand Dependable Quality and unusually Prompt Service.

We manufacture a complete line of Machine Screws, Machine Screw Nuts, Wood Screws, Lag Screws, Pipe Plugs and Cap Screws. It is possible that you are using special screw parts that can be produced by our method at a great saving to you.

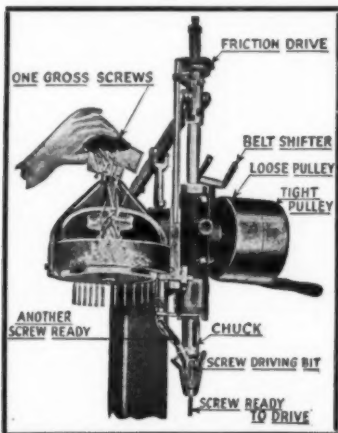
Send us Blue Prints or Samples, together with quantities required, for an estimate.

*Remember that in Screws—there is a difference.
Let us show you.*

Elco Tool & Screw Corporation
1808 Broadway, Rockford, Illinois

"IT PAYS TO USE GOOD SCREWS"

Reducing Your Shop Costs



Don't
Overlook
Screw
Driving
and the
Savings
made
possible
by the
REYNOLDS
with the
Time and
Cost Cutting

Showing Magazine Feed of the Reynolds Automatic

AUTOMATIC MAGAZINE FEED

CONDITIONS TODAY make the reduction of shop costs imperative—no one can afford to overlook this angle.

SCREW DRIVING—if you are not using REYNOLDS—is an item that is probably costing you several times what it should.

THE AUTOMATIC MAGAZINE FEED, built into a thoroughly practical and long-tried machine, enables the REYNOLDS to reduce screw driving costs 65 to 85% while turning out better, more uniform work.

ASK US TO PROVE THIS. Just drop us a line giving length and gauge of screws you use and dimensions over all of your work, and we'll gladly send facts and figures.

The Reynolds Machine Company
Dept. H. H. Massillon, Ohio

"THE MODERN WAY TO DRIVE SCREWS"

A New Internal

**Developed by BLESER MOTORS, Ltd.
16th and Madison Sts., Springfield, Ill.**

Are You Interested —

1. *In promoting an engine* which will outperform any internal combustion engine now known to industry, and which can be manufactured and sold cheaper than the conventional type of engine?
2. *In financing* such a project?
3. *In having one or more engines built for special purposes* (races, etc.) where hitherto unheard-of performance is wanted? You get light weight, small size, lack of vibration, extreme high power, smooth power, etc., at no greater cost than with other specially built engines.
4. *In obtaining manufacturing rights and patent license* for commercial production of these engines?
5. *In handling financial or sales end* of such production?
6. *In the development of oil engines and further improvements* in internal combustion engines?
7. *In the production of development of air motors or air compressors, pumps, etc.,* of extremely small size and weight, and with extremely large capacity?
8. *In putting us in touch with parties who would be interested* in any of the above projects?

IF SO, YOU ARE INVITED to write us and arrange for a running demonstration of the new Bleser Motor illustrated herewith.

Bleser Motors, Ltd.

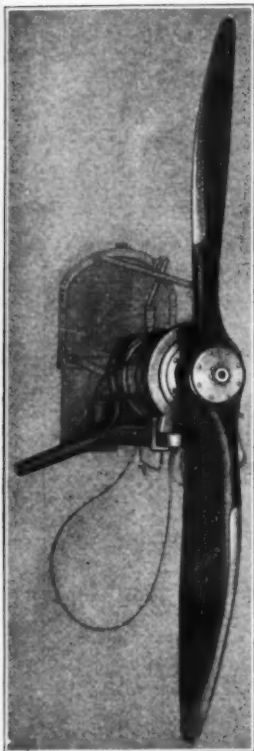
16th and Madison Sts.,

Springfield, Illinois

Combustion Engine

The picture herewith is from an actual photograph
of the working model of the

No. 539 Bleser Motor



SPECIFICATIONS :

TYPE, 12 cyl. water cooled, 4 cycle.

HORSEPOWER, ...200 at 1200 r.p.m.

(Pony brake test)

DIAMETER, 19 inches.

FRONTAL AREA, 2 sq. ft. (approx.)

WEIGHT, 386 lbs.

LENGTH, 41½ in.

DISPLACEMENT, 539 cu. in.

24 explosions in 2 revolutions.

Patented and Patents Pending

This is a cam engine utilizing six double ended pistons, with roller bearing piston rollers working in opposed cylinders, which are arranged in a circle around the main shaft, and are parallel to the main shaft. The cam is so constructed that each piston goes through four cycles (two complete crank motions) during each revolution, and each cylinder therefore fires once per revolution of the main shaft.

NOTE

This photo is of the engine mounted in the test stand just as it is run. The radiator mounted in the top of the stand is of course temporary, and is used to cool the water while it is being run inside the building. The instrument panel containing the throttle, tachometer, temperature gauges, etc., is mounted at the rear of the stand.

*Additional information will be
furnished on request*

Bleser Motors, Ltd.

16th and Madison Sts.,
Springfield, Illinois

You CAN'T Anneal and Drill Out a High Speed Tap— But You CAN



buy a tool made for the purpose of removing the broken pieces. It's called the

Walton Tap Extractor

and a mighty handy tool it is, too! Don't hold up production and waste a valuable mechanic's time in digging out broken taps when all you have to do is insert the WALTON—twist the end—and the tap backs out without injury to the threads. Made in three and four-flute styles.

*Glad to Send One for a
60-Day Trial in Your Shop*

The Walton Company
302 Pearl St., Hartford, Conn.

MARKING DEVICES

RUBBER STAMPS



STEEL STAMPS



BURNING
BRANDS



ETCHED METAL
NAME PLATES



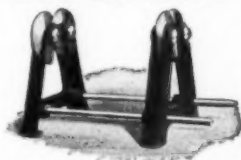
BRASS
LABELS



THE SCHWERTLE STAMP CO.
BRIDGEPORT, CONN.

Anderson Ever Ready

Exceedingly Sensitive



Balancing Ways

Easy to Manipulate

Made in six sizes to balance anything that revolves from a crank shaft to a 24,000 lb. turbine rotor. They require no special leveling, no adjustment, and no centers.

Equipped with glass-hard spindles, chilled steel discs, and especially sensitive ball bearings, to give accurate, long time service.

"Swing"	20"	40"	60"	72"	96"	72"
Greatest distance bet. standards..	20"	30"	30"	66"	88"	20'
Capacity in lbs.	1000	2000	2000	5000	10000	24000
Approx. shipping weight.....	45	90	150	350	650	
Code	Bend	Bid	Bis	Bib	Ben	

Anderson Bros. Mfg. Co.

1915 Kishwaukee St., Rockford, Ill.

STANDARDIZATION PAYS



**MOTORIZED
SPEED
REDUCTION**

**COMPACT
EFFICIENT
ECONOMICAL**

Submit Your Specifications

BOSTON GEAR WORKS, INC.
DEPT. HMT, NORTH QUINCY, MASS.

BOSTON GEARS

Distribution of Hitchcock's Machine Tool Blue Book (Selected Circulation)

The table below shows the circulation of Hitchcock's Machine Tool Blue Book by States, and incidentally how the users of iron working machinery are distributed.

The figures given stand for the number of plants to which the Blue Book is sent, except for some hundreds of the larger manufacturers of metal products, where copies are addressed to the important mechanical officials by name.

The main reason why the Blue Book has thrived is its ability to put advertising messages across to the whole body of possible buyers everywhere in the country. Its value for that purpose hardly can be overestimated.

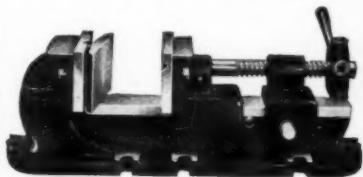
Revised to January 1, 1933

Alabama.....	149	Nevada.....	14
Arizona.....	34	New Hampshire.....	114
Arkansas.....	84	New Jersey.....	742
California.....	903	New Mexico.....	24
Colorado.....	189	New York.....	2,834
Connecticut.....	879	North Carolina.....	277
Delaware.....	52	North Dakota.....	32
District of Columbia.....	63	Ohio.....	2,874
Florida.....	115	Oklahoma.....	108
Georgia.....	246	Oregon.....	142
Idaho.....	25	Pennsylvania.....	2,605
Illinois.....	2,502	Rhode Island.....	189
Indiana.....	922	South Carolina.....	144
Iowa.....	468	South Dakota.....	32
Kansas.....	249	Tennessee.....	212
Kentucky.....	164	Texas.....	322
Louisiana.....	148	Utah.....	39
Maine.....	136	Vermont.....	82
Maryland.....	281	Virginia.....	194
Massachusetts.....	1,668	Washington.....	285
Michigan.....	1,673	West Virginia.....	147
Minnesota.....	376	Wisconsin.....	1,018
Mississippi.....	72	Wyoming.....	14
Missouri.....	668	American Possessions.....	77
Montana.....	40	Foreign (Canada, Europe, Australia, etc.).....	659
Nebraska.....	124		
Total.....		25,412	

Of the above, 20,803 go to private concerns, 1,688 to railway mechanical and purchasing officials, 433 to technical schools, etc.

Gem Drill Press Vise

Discard Obsolete Equipment!



Made
In
3-sizes
Up To
10½"

Equip Your Plant with GEM VISES

J. E. Martin Tool & Die Works

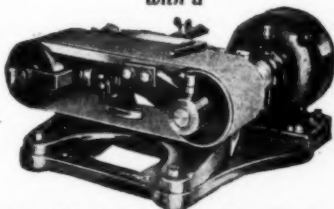
528 W. State St.,

SPRINGFIELD, OHIO

WRITE FOR NEW PRICES

Abolish Expensive Hand Finishing

with a



Simplex-M Abrasive Band Grinder

This Grinder accelerates production and cuts costs. Hand emerying or filing operations are antiquated in comparison. The use of this new modern machine assures straight grain finishes with sharp edges. *Details of this and other styles and sizes on request.*

WALLS SALES CORP., 96 Warren Street
NEW YORK



ARMSTRONG

TRADE MARK REG. IN U.S. PAT. OFFICE

announces

Armide Cutters

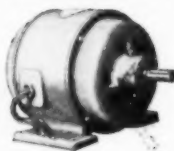


Ready-ground
— 5 standard
cutter forms

Armide is an improved Carbide— a CARBIDE-ALLOY —for machining hard and tough steels, brasses and aluminums. Armide has no affinity for steel so does not "crater". Tips guaranteed not to come off. Armide Cutters fit standard ARMSTRONG Tool Holders, bring the advantages of Carbide tools within range of every shop; hold their edge from 10 to 200 times as long as high speed steel.

Write for **ARMSTRONG BROS. TOOL CO.**
"The Tool Holder People"
Circular 308 N. Francisco Ave., CHICAGO, U. S. A.

Simple—Rugged—Dependable



The New 1933 Emerald Motors

Here is a new *Low Priced Motor* that is designed to meet the requirements of modern industry. The Motors are made of the best material to stand the severest test.

SINGLE PHASE TYPE MOTORS:— $\frac{1}{2}$, $\frac{3}{4}$ and 1 h. p., 110/220 volt, 60 cycle, 1750 r. p. m., repulsion induction.

Also Three Phase Motors in $\frac{1}{2}$ h. p. to $1\frac{1}{2}$ h. p. sizes.

Send For Complete Details and Attractive Prices.

EMERALD ELECTRIC CO., Adrian, Mich.

- - 5 YEAR GUARANTEE! - -

To Industrial Plants

For the mutual benefit of yourselves and our advertisers, we want to be sure that the Blue Book goes, without cost, to those in your plant who can use it to good advantage.

Quite a number of you, particularly among automobile manufacturers, have sent us lists of the prominent men in your organizations who are most closely identified with the planning of your improvements and the selection or purchase of your machinery.

If you have not done this, you are earnestly requested to send us such a list of names, so that we may mail the Blue Book regularly every month to those of your own selection, without cost or obligation of any kind whatsoever. Simply tear out this page, write the names on the reverse side, and mail it to the publisher.

Our only object is to make the Blue Book the best buying and selling medium on earth between manufacturers of machine tools and shop equipment and plants such as yours.

(See next page)



Buy this 9" ATLAS LATHE
with what it **SAVES** on power

\$79⁰⁰

**Complete
as Shown
less motor.**

Transfer your small lathe work from large, power consuming lathes to an ATLAS. Use only $\frac{1}{4}$ H. P. motor. Can easily pay for itself in 6 to 8 months. A fine, accurate machine, strongly built of best materials. Self contained. 18" between centers, also larger sizes. Cuts all standard screws from 4 to 72 per inch. Two weeks trial. Satisfaction or money back guaranteed. Easy terms. *Write for all details.*

ATLAS PRESS CO., 1850 N. Pitcher St.,
Kalamazoo, Mich.

**THOMPSON
12"x36"
Universal**

**For All Kinds
of GRINDING**



**Saves
Time
and
Money**

Plain, edge, die, surface, cutter
and reamer, and internal—and
good at all of them.
Efficient, accurate,
dependable.

Work adjusts to
a fixed grind-
ing wheel, an
exclusive feature
that's better.

*All standard machines
equipped with auxiliary
independent coarse cross
feed for surface grinding.*

**The Thompson
Grinder Co.**

1534 West Main St.,
Springfield, Ohio

Soft Boiled Preferred.

A man walked reluctantly into a hat store.

I just lost a bet, he said, and I want to get a soft hat.

The salesman, selecting a hat from the shelf behind him, handed it to the prospective purchaser with the remark:

This is the softest hat we have.

The customer gazed at it speculatively. What I want, he said reluctantly, is something a little more tender. I've got to eat it.

His Vacation.

He was standing on the corner, paying absolutely no attention to anyone. He shook his head and mumbled to himself: No, no, no—no, no, no! He paid no attention to the crowd that gathered but just kept on saying, No, no, no!

An officer shook his arm and said: What's the matter, my friend?

Nothing at all, came the reply, I'm just a "yes" man taking a day off!

No Wasted Time for Him.

The Scotchman had fallen into the well and, while swimming around in it, called to his wife. She came running to him and asked, Shall I call the servants from the field, that they may pull you out?

What time is it? inquired he.

Eleven-thirty, said his wife.

Well, never mind, said he, I'll swim around till dinner time!

Correct!

What is it that has 100 legs, no brains and sings?

All right, what?

Fifty chorus girls.

Transmigration.

The motorist had had an accident with his light car on a country road. He limped painfully to a telephone box and called up the nearest garage. Hello, said he, I've turned turtle. Can you do anything for me?

I'm afraid not, came the sweet feminine reply. You've got the wrong number. What you want is the zoo.

TRY us on your Difficult Riveting Job



We have solved the riveting problem for many manufacturers, who thought hand riveting was their only way out, until they investigated the "GRANT," which does their work better and at much less cost.

"GRANT" Noiseless Spinning Riveters

cover all classes of work, including awkward pieces and riveting in out-of-the-way places.

*Send samples of your work
for riveting and cost estimate*

The Grant Mfg. & Machine Co.
C. E. Station, Bridgeport, Conn.

For Light and Heavy Etching

With 24 Stages of Control.

The LUMA Master Etchtool fulfills every marking requirement that can be done by an electric Etching outfit.

A Production Tool with as many as 24 different stages or varieties of control for regulating the depth of marking, this tool can be used for extra light marking of machine scales, micrometers and fine tools or can be used for *extra heavy and deep* marking of rough and unfinished iron, cast iron, forgings, steel plates, etc.

*Send for circular giving
complete data and details
of this modern Instrument.*



Built rugged
for continuous
work on the
production
line.

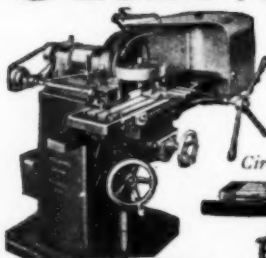
LUMA ELECTRIC EQUIPMENT CO.
DEPT. H.—Main P. O. Box No. 132—TOLEDO, OHIO

ANNOUNCEMENT

The Sterling-French Machinery Company, New Center Building, Detroit, Michigan, has been appointed to represent the Sundstrand Machine Tool Company of Rockford, Illinois, in the Detroit territory and Border Cities in Ontario. Mr. D. B. Burleigh, formerly Vice President and Sales Manager of the Sundstrand Machine Tool Company will handle the Sundstrand line for Sterling-French. In addition to his extensive experience in developing cost-cutting applications of Sundstrand machine tools, Mr. Burleigh has a wide and intimate knowledge of modern production methods, gained through cooperating personally with leading manufacturers here and abroad, that will aid him substantially in serving his clients most efficiently.

Sterling-French Machinery Co.
New Center Building, Detroit, Mich.

GRINDERS



PULLEY GRINDERS

Finish Belt Surface, Crowned or Straight, from the Rough. Also Truck Treads and Curved Work.

GRINDER CHUCKS hold Abrasive Rings, 10" to 30" dia.

for roughing and finishing

FLAT WORK

Ring Wheels 12" and 16"
Table travels 16" and 24"

For Production to Tool Room

*Send
for
Circulars*

Work Bound
to be True



Flat Work
Grinder

THE GRAHAM MFG. CO., 70 Willard Ave.
PROVIDENCE, R. I.

Send Us Your Inquiries

We are always glad to forward a memo of any machinery or equipment for which you are in the market to all of our advertisers without charge.

The Blank Form

printed on the other side of this page is for this purpose, and you are free to make use of it without obligation.

It has been the means of bringing many buyers and sellers together, to their mutual profit and satisfaction.

Mail your needs to

HITCHCOCK PUBLISHING CO.

508 S. Dearborn St., Chicago

FREE BUYERS' SERVICE

To All of Our Readers

If you will list below the new or used metal-working machines or machine shop equipment for which you are in the market, and mail it to us, we shall be glad to broadcast it to all of our advertisers. Replies will come from them, not from us.

But if you prefer that we put you in direct touch with the manufacturers of any particular machine tool or other metal-working equipment, let us know and we will endeavor to locate them for you.

Name

Address

We are in the market for

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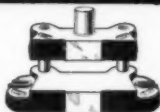
Mail to Hitchcock Publishing Co., 508 So. Dearborn St., Chicago, Ill.

**BETTER-MADE
DIE SETS**

BAUMBACH

**AT LOWER
COST**

**24
DIFFERENT
STYLES**



**OVER
95,000
SIZES**

STANDARDIZED

Semi-Steel

DIE SETS

Drop Forged Steel

Send For Our New 208 Page Catalog

E. A. BAUMBACH MFG. CO.

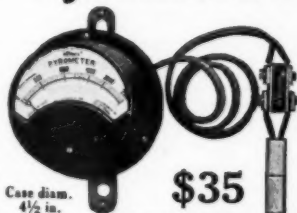
1810 South Kilbourn Ave., CHICAGO, ILLINOIS

“ALNOR” Pyrometers

**for the
Hardening
Furnace**

MODEL 223

Inexpensive, yet accurate and durable, the ALNOR Pyrometer is used by large and small shops everywhere for heat-treating work. Because of its low first cost and compact size it is also very popular for soft metal melting, galvanizing, die casting, japanning, enameling, measuring flue gas temperatures and many other purposes.



Case diam.
4½ in.

Scale length
3½ in.

\$35

With 10 ft. Alloy Wire, connector block and a No. 8 gauge insulated thermo couple 24" long without protection tube

Write for descriptive folder

Illinois Testing Laboratories, Inc.

150 W. Austin Ave.,

Chicago, Ill.

WANTED

(Attention—Salesmanager)

Active Sales Engineer, established ten years in New York Territory, who has sold single customers as many as fifty machines.

Desires to represent a reliable manufacturer of any high class product which can be sold to the largest concerns and a varied substantial clientele in this territory. Also, to Russia, Japan, China, Europe and other Foreign Customers.

Can furnish highest references, substantiating a wide Manufacturing, Sales Promotion and Business Experience.

Address: Box 116, c/o Hitchcock Publishing Co.
508 South Dearborn Street, Chicago, Illinois

1905  1933

NO LET UP ON QUALITY
TO MEET CHEAPER MARKETS
IT DOES NOT PAY

Always Cheaper To Buy The Best

Type M6— $\frac{1}{2}$ H. P.



STRAND FLEXIBLE SHAFT MACHINES

Represent The Highest Class
Workmanship And Materials.

ALL AMERICAN MADE

Manufactured By

N. A. STRAND & CO.

5001-5009 N. Lincoln St.,

Chicago, Ill.

T. H. L. FRONT LEVER BENCH PUNCH

Malleable iron body; working parts hardened. Steel shaft and plunger. Die cannot lose alignment with punch. All parts interchangeable. Built for hardest, toughest work. Weight 70 lbs.

PRICE \$35

Extra Punches, 20 cents each; extra dies, 30 cents.

Capacity $\frac{1}{2}$ " holes through $\frac{3}{16}$ " steel; $\frac{13}{32}$ " through $\frac{1}{4}$ " steel. Can also be made for up to $\frac{7}{8}$ " holes through thinner metal. Punches and dies in stock from $\frac{1}{8}$ " to $\frac{1}{2}$ ".

Immediate shipment from stock

**T. H. LEWTHWAITE
MACHINE CO.**

(Est. 1890)

311 E. 47th St., NEW YORK



No. 27 Polishing Machine

for Auto Bumpers, Stove Tops,
Stainless Steel,
Electric Irons and
Other Specialties.



*"35 Years of
Polishing Machine
Experience"*

**Manufacturers of Grinding and Polishing Machines,
Punch Presses, Shearing and Bending Machines.**

Descriptive Illustrated Circulars and Prices on Request

**Excelsior Tool & Machine Co., East St. Louis,
ILLINOIS.**

SPEED

SPOT WELDERS

$\frac{1}{2}$ to 50 K. V. A.

Made foot-operated
and variable speed
**AUTOMATIC MOTOR
DRIVE**; no change
gears, for welding
from .0005 to $\frac{5}{8}$ "
combined thickness.

Welders for Fine
Work Priced As
Low As

\$55.00

Submit Your Problems



MANUAL



AUTOMATIC

EISLER ELECTRIC

763 So. 13th Street,

NEWARK, N. J.

Distributor and Dealer Connections Desired



When You Move

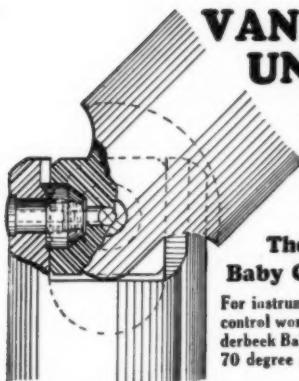
Please drop us a line, giving both your *old* and *new* address. Or if the name of your company has been changed, please tell us the *old* name and the *new* one. That will enable us to keep our mailing list up to date, and will insure your receipt of this publication monthly.

If you wish this book addressed to any particular individual in your plant, we shall be glad to comply with your request. There is no charge. Thank you.

Hitchcock Publishing Co.

508 So. Dearborn St.,

Chicago, Ill.



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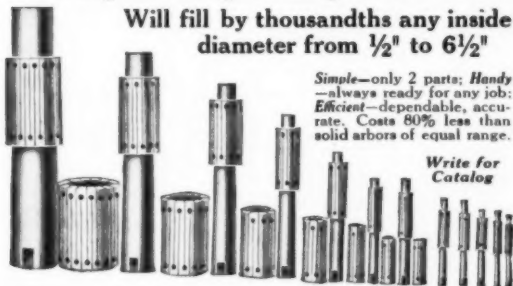


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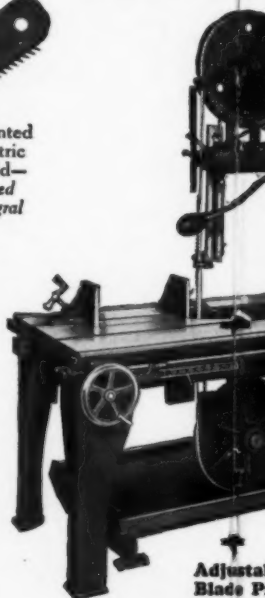
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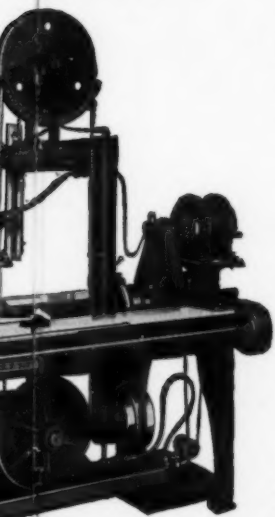


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Proconier Safety Chuck Co., 14 So. Clinton St., Chicago, Ill.
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Brown-Morris Co., Detroit, Mich.
Brown Machinery Co., St. Louis, Mo.
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Denshus Steel Products Co., 74th and Ashland Ave., Chicago
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Armstrong Bros. Tool Co., 808 N. Francisco Av., Chicago
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Vises, Machinists'

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Vises, Milling Machine

Graham Manufacturing Co., Providence, R. I.

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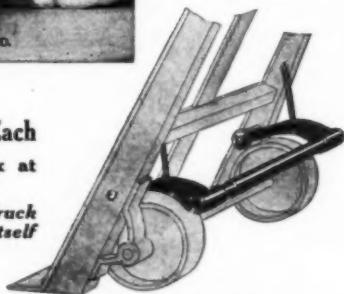
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We have a large stock of Lathes, Radials, Shapers, Square Shears,
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Drill, 25" Barnes back geared.
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Drill, 3-spindle Avey.
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Grinder, 12"x60" Landis universal.
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Lathe, 24"x12" Schumacher & Boye.
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Miller, No. 2 Kempamith.
Miller, No. 3 Brown & Sharpe.
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Planer, 42"x42"x26" Wheeler, 2 hds.
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Press, No. 18 Bliss toggle.
Press, No. 37 Niagara str. back.
Press, No. 24 Toledo cam drawing.
Press, No. 723 Toledo cam drawing.
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Tapper, auto., Rickert & Schafer.

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Drill, radial, 6' Dreis, s. p. d.
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Gear cutter, spur, 36"x10" Newark.
Gear hobber, No. 4 Sch. & Sch. 116".
Grinding mche., Medart Auto. Roll.
Grinder, centerless, No. 2 Cincinnati.
Grinder, centerless, No. 4-C Detroit.
Grinder, internal, No. 70 Heald.
Grinder, rad., 14" M. & D., m. d.
Grinder, surface, No. 16 Blanchard.
Grinder, surface, 14" Arter.
Grinder, surface, No. 2 Reid, b. d.
Grinder, tool & cut., No. 2 Walker.
Generators, eng., oil, gas, belt & mtr.
Hammer, Blacker, power, 35-lbs.
Hammer, 80-lb. Bradley, cush. helve.
Hammer, 200-lb. Bradley, cush. helve.
Hammer, 200-lb. Bradley, compact.
Hammers, Nos. 2-B, 3-B, 4-B, Nazel.
Hammers, steam, 600 lb. to 6000 lbs.
Header, No. 2 Wat. Far., o.d., tr. st.
Jacks, 35-ton Barrett, ball bearing.
Keyseater, No. 0 & 3 Baker.
Lathe, 14"x6" Hendey, q. c. g., m. d.
Lathe, 16"x6" LeBlond, q. c. g., d.b.g.
Lathe, 16"x6" Monarch, g.h., qcg., m. d.
Lathe, 14"x12" Lodge & S., g.h., m. d.
Lathe, 24"x16" Bridgeford, g. hd. m. d.
Lathe, 20"x12" LeBlond, qcg., ta., b. d.
Lathe, 26"x20" Bridgeford, g.h., m. d.
Lathe, 48"x26" Bridgeford, g. hd. m. d.
Lathe, turret, No. 6 Warner & S.
Lathe, turret, 18" Libby, m. d.
Lathe, turret, 24" Steinie, 6 1/2" hole.
Lathe, tur., 26" Gisholt, 9" hole, m. d.
Lysholm tables, 72"x30".
Miller, duplex, 24" Cincinnati, auto.
Miller, plain, No. 2-A Milwaukee.
Miller, universal, No. 3 LeBlond.
Nut tapper, 6-spindle Acme, 2".

Nut, tapper, 1/2" Acme, 4-spindle.
Motors, a. c. & d. c.
Pipe machine, 2" Landis.
Pipe mchs., 8" Oster, 8" Williams.
Planer, 30"x30"x10" Woodward & P.
Planer, 48"x48"x18" Cinti., belt drive.
Planer, o. s., 36"x36"x16" D. & H.
Planer, o.s., 48"x48"x16" D. & H. m. d.
Planer, rotary, 48" Niles, m. d.
Press, auto., McDonald, No. 31-EG.
Presses, o. b. i. Bliss, Nos. 18, 19, 20.
Press, o. b. i., No. 3 Rockford; 8500 lb.
Press, hydraulic, 1,000 ton United.
Press, hyd., 400-ton Robertson, m. d.
Press, hyd. 100-ton Watson-Stillman.
Press, No. 78 1/2 Bliss, t. r. 10" str.
Press, No. 92 B Toledo, d. c. 2 1/2" str.
Press, No. 96-A Toledo, d. c. 8" str.
Press, screw, No. 87 Niagara.
Press, wheel, 200-ton Lourie.
Punch, hand, Shatz, bar and angle.
Punch & sh. No. 6 L. & A. 1/2" thru 1/2".
Punch, EF Cleveland, 36" thr., 1 1/2".
Punch, multiple, No. 5 H. & J. 10".
Riveters, air, hammer, spinning.
Rolls, bend, 8" 1/2" Bertsch, d. e., b. d.
Rolls, bending, 12" 1/2" H. & J. d. e.
Roller, thread, Nos. 30, 40, 50, 60 W.-F.
Saw, band, metal No. 2 Klem, m. d.
Saw, band, No. 8 Marvel.
Saw, cold, 48" Newton, m. d.
Saw, friction, Nos. 2 & 3 Ryerson.
Saw, hack, No. 5 Marvel, 6" x6".
Saw, hack, No. 4 Robertson, 8" x8".
Screw mchs. Nos. 52, 53, 55 Nat. A.
Shapers, 16", 20", 24" & 36" G. & E.
Shaper, 48" Morton draw cut, m. d.
Shear, angle, 6" x6" x1" H. & J.
Shears, alligator, 1 1/2", 2", 3" & 4".
Shear, bevel, Lennox 1/2", b. d.
Shear, No. 1 Gray, 3/16", 34" gap.
Shear, slitter, gang 36", Yoder, m. d.
Shear, guil. No. 5 H. & J. 4" sq., m. d.
Shear, rotary, 1/2" Ryerson.
Shear, 36"x16 ga. Pexto, foot.
Shear, squ., 60"x3/16" McSherry b. d.
Shear, squaring 8"x14 ga. Ohl.
Shear, sq., 10"x10 ga. Kutscheid, m. d.
Shear, squar. 12" Niagara, 10 ga., m. d.
Shear, 54" x 1/2" Garrison, 21" gap.
Shear, 12" x 1/2" Wheeling, 31" gap.
Slotter, 18" Dill, motor drive.
Straight'r, No. 3 Medart, cap. 1"-4 1/2".
Straight'r, 48" United, 16 ga. 13 rolls.
Straightener, 1 1/2" round Abramson.
Straightener, 4" round Abramson.
Swaging mche., No. 5-A Standard.
Testing mche., Brinnell hardness.
Testing mches., 100,000-lb. Olsen.
Tumbling barrel, 18"x36", b. d.
Upsetters, 1" to 6".
Welders, spot and butt.
Woodworking Machinery.

USED AND REBUILT MACHINERY

FOR SALE BY

Brown Machinery Co.,

2333 N. 9th St., St. Louis, Mo.

Brake, press, L. & N. 10' 14 ga.
Drills: 24", 26" and 32" No. 66-D
Moline 4-spindle Hole Hog.
Grinders: No. 6 Besly dbl. spindle;
No. 220 Badger auto. disc; 12x30"
Modern, plain, s. c. c. s.; No. 12
Brown & Sharpe, universal tool.
Hammer, 40 lb. Bradley, halve.
Lathes, 30" Blaisdell; 28-40" Lodge
& Shipley; 26" Putnam, t. a.; 20"
American, t. a.; 16" L. & S.; 16"
Monarch; 12" & 14" Sen. Falls, q. c. g.

Millers: No. 2 Hendey-Norton, univ.;
No. 34 Fox; No. 4 Hendey Lincoln;
No. 3 Kemsith, universal.
Press, No. 7 Zeh & Hahneman,
Nos. 1, 3, 4 Loshbough Jordan.
Punch, Cleveland C 4 in 4"; Rock
River Style L 4 in 4";
Shaper, 24" Ohio; 14" Smith & M.
Shear, 50" 10 ga Excelsior gap.
Shear, square, 10' L. & N. 14 ga.
Threaders: 4" Geometric; National
1 1/2" double head.

FOR SALE BY

Midwest Equipment Co.,

628-30 W. Lake St., Chicago, Ill.

Air Compressors, 8x8 and 6x6 Ingersoll Rand, complete.	
Arc welder, General Electric, 200 amp. cap., m. d., complete.	\$ 275.
Disc grinder, No. 2 Gardner 18", motor drive.	150.
Drill press, No. 2 Avey, 4 spindle, 15" overhang, 99% new.	400.
Gear hobber, No. 3 Barber Colman, with arbor and gears.	250.
Grinder, No. 6 18" Besly Ring Wheel, like new.	450.
Grinder, No. 1 LeBlond tool and cutter, with all attachments.	165.
Lathe, 16"x6" Lodge & Shipley, geared head, motor driven, complete.	250.
Lathe, 19"x8" Sidney, quick change, double back geared, complete.	335.
Milling machine, No. 2 Cin. Univ., div. head, tail stock, vise and arbors	450.
Milling machine, No. 2 Hendey Universal, complete.	350.
Press, 30 ton Lucas straightening.	150.
Punch press, No. 4 Marshalltown, o. b. i., bolster plate, like new.	225.
Punch press, No. 4 Rockford back geared, 3" stroke.	275.
Punch & shear, No. 53 Beloit, with angle cutting attachment.	145.
Radial drill, 30" Fosdick, single pulley drive.	350.
Shaper, 7" Rhodes, complete with vise.	125.
Shear, 10' Dreis & Krump, 14 ga. capacity, practically new.	500.
Unit-shear, 54" throat, 14 gauge capacity.	150.
Spot welder, 12 K. V. A. American Electric Fusion.	165.
Planers, Lathes, Screw Machines Air Compressors, Woodworking Machines.	

FOR SALE BY

Scott-Bansbach Machinery Co., 4607 West 20th St., Chicago, Ill.

Automatic screw machines, B. & S., No. 00, 0 and 2.	\$100. to \$450.
Automatic screw machine, Gridley 4 spindle "F" 1 1/2" & 1 1/4"	300. to 400.
Automatic screw machine, 3 1/2" Cleveland Model A, No. 27182.	300.
Brake, 10' Ohl 10 gauge, motor drive with motor, late type.	850.
Drill, 24" Sibley sliding head, b. g. and p. f.	125.
Drill, 2-spindle H. W., h. s., b. b. heavy duty, class B.	150.
Gear cutter, B. & S. No. 3, 26" for spur gears.	200.
Grinder, Capitol internal, capacity 3/16" to 2"x3"	75.
Lathe, 13"x5" Carrol-J. semi quick change with 2 chucks.	125.
Lathe, 18"x6" Hendey quick change, taper attachment, serial No. 19189	350.
Lathe, 20"x8" Monarch, d. b. g., q. c. chucks.	250.
Lathe, 30"x13" H. S. & G. heavy duty, q. c., d. b. g. 16,000 lbs.	800.
Miller, No. 1Y B. & S., not b. g. but p. f., with vert. attach. and c/s.	275.
Miller, No. 2H B. & S. plain, cone type, with vise, c/s and arbors.	400.
Miller, No. 1 Garvin universal, fully equipped.	250.
Miller, Cleveland universal, No. 1 g. h., fully equipped.	450.
Miller, No. 2 MU. Garvin universal, fully equipped.	350.
Miller, 12" Cincinnati mfg. type, s. p. d., vise and pump.	150.
Miller, Briggs, G. & E. manufacturing, 16"	75.
Miller, No. 5 Becker vertical, no rotary.	300.
Miller, No. 7 Becker, Lincoln type.	75.

USED AND REBUILT MACHINERY

FOR SALE BY

The O'Brien Machinery Co.,

Automatic, 14" Cone, practically new.
Bending rolls, 10' Bertsch, 4" cap.
Bending roll, 25' H & J, 4" cap.
Boring mill, 26" vertical, latest type.
Column facer, 14" Espen-Lucas.
Crane, electric travel, 15 ton a. c.
Drill, 4' Cincinnati-Bickford, radial.
Grinder, 30"x162" Landis, m. d.

113 N. Third St., Philadelphia, Pa.

Hammer, No. 6N Nagel, motor dr.
Hammer, 2000 lbs Chambersburg.
Lathe, 108"x48" Niles, motor drive.
Lathe, 23"x20" LeBlond, belt drive.
Lathe, 36"—60"x32" McCabe, belt.
Pipe mchs. 2, 4, 6 & 12" belt & m. dr.
Punch, "EF" Cleveland, 14"x1"
Shear, 84" Newbold, 4" cap., 27" gap.

FOR SALE BY

Marr-Galbreath Machinery Co.,

Air compressor, 10x10" Chgo., n.s.b.
Air comp., (garage), 3 to 7 cfm, m. d.
Air receivers, 4'x18", 150 lb., (14).
Angle roll, No. 3 Niagara, 14"x3/16".
Beading machine, No. 100 Niagara.
Bolt cutter, 4" Geometric, m. d.
Boring mill, 30" King; and Bullard.
Boring mill, horizontal 3" bar, b. m.
Brake, 8'x10 ga. Chicago, pan, m. d.
Brake, 52"x18 ga., P.S. & W., hand.
Brake 10' Keene toggle, 16 gauge.
Brakes, hd, 10' for 18 ga. Robinson.
Broaching mch. Nos. 1 & 3 LaPointe
Cold header, 7" W-F., solid die.
Crimping roll, 64" Robinson, 16 ga.
Drills, 20" b. g., p. f.
Drill, 24" Rockford, g. f. taper att.
Drill, 25" Snyder, s. h., b. g.
Drill, 26" Prentice, b. g., s. h., m. d.
Drill, radial, 5' Western, g. b., m. d.
Drill, radial, 3' Dreses.
Forging mchs., 14", 3" & 34" (steel).
Grinder, No. 14 Landis universal.
Grinder, universal t. & c. Nos. 2 & 3.
Grinder, sur, No. 2 B & S., mag. ck.
Grinder, 18-D. Rowbottom, o.h.b.b.
Hack saw, 5x8" Racine, belt.
Hammer, 800 lb. Erie stm. forg., s.f.
Hammer, 1000 lb Chbg., steam drop.
Hoists, chain, 1 to 8-tons capacity.
Jointer, (wood) 6" Wallace, motor.
Jointer, 8" F. & E., rd. hd.
Jointer, (wood) 8" F. & E.
Keyseater, No. 2 Mitts & Merrill.
Lathes, Hendey, g. h. 12"x8": 16"x6".
Lathes, 14"x6" Champion, q. c. g., tur.
Lathe, 18"x8" L. & S. sel. hd. s. p. d. t. a.
Lathe 19"x10" LeBlond, q. c. g., t. a.
Lathe, 20"x12" Monarch, q. c. g., t. a.
Lathe, 22"x10" 10" Greaves-K., q. c. g.
Lathe, 22"x13" Lehman, g. h., q. c. g. t. a.
Lathe, 24"x12" Pgh., q. c. g., chuck.
Lathe, 27"x16" Pgh., t. a., chuck.
Lathe, 30x15" Lehman, gd. hd.
Lathe, 32"x16" Pgh., q. c. g., chuck.
Lathe, 48"x26" geared head, m. d.
Milling machine, plain, No. 4 Burke.
Miller, Hand, Whitney, m. d.
Miller, No. 28 Ohio; No. 3 Cin'ti.
Miller, 2-GS. Hendey, g. b., s. p. d.
Millers, vert., Becker, 3, 4B, 5B.

58 Water St., Pittsburgh, Pa.

Miller, No. 14 Garvin plain, (2).
Miller, No. 2-AU Garvin universal.
Miller, universal No. 4 B. & S.
Miller, auto. No. 2-M P. & J., s. p. d.
Motors, 1, 2 & 3 ph., also d. c.
Pipe machine, Williams, 3", s. p. d.
Planer, 30"x10' W. & P., 2-heads.
Press, 42 h.p. Toledo, horn, plain.
Press, No. 6 Toledo, o. b. i., pl. m. d.
Press, No. 14 Tol. horn, 34" & 4" st.
Presses, Nos. 3 & 4 Bliss, punch type.
Press, No. 19, Bliss o. b. i.
Presses, foot, No. 87 Bliss, pendulum.
Press, reducing, No. 61 Bliss, 4" str.
Punches, a. e. 36", 48", 60", 72" thts.
Punch, s. e., Badger, 7" thrt., 4"x8".
Punch, Rapid, 20" thrt., 1"x1", m. d.
Punch & shear, d. e., 9-A., Beloit.
Punch & shear, d. e. 16" thts; 14"x1"
with angle & bar shear blades, m. d.
Punch & stake riveter, No. 123-C.
Toledo boilermakers.
Riveters, 2-A, 3 A, 54 B, high speed.
Roll, angle, No. 4 Buffalo.
Rolls bending, 12"x8", d. e., m. d.
Rolls, bend'g, 10"x5/16" Bertsch, d. e.
Rolls, bending, 8"x8" Bertsch, m. d.
Rolls, bend'g, 5"x5/16" Bertsch, d. e.
Screw machine, No. 0G B. & S.
Shaper, 15" Hendey, pillar, m. d.
Shaper, 16" Columbia g. b. s. p. d. 95g.
Shapers, G. & E., 16", 20", 24" & 32".
Shaper, 20" S. & M., g. b., s. p. d.
Shaper, 24" P. & J down feed & m. d.
Shaper, 25" S. & M. b. g., crk., A-1.
Shear, 72"x3/16"x20" gap. Stoil.
Shears, 4" & 4" Lennox, throatless.
Shears, Alligator, 1", 14", 3", 3", 4".
Shear, throat, No. 18 Lennox, hand.
Shear, Unishear, 14 ga. 4 h. p. mtr.
Shear, rotary, 12" thrt., cap. 10 ga.
Shear, rotary, No. 208 Niagara,
circle attachment, No. 8 ga.
Shear, rotary, 16 ga., Yoder, 24" thr.
Shear, squaring, 8"x14 ga. power.
Shear, 10"x16 ga. Ohl power.
Slotter, die, Garvin, cone drive.
Turret lathe, 28" Gisholt, 94" h. s.
Turret lathe, 26"x74" h. s., Libby.
Wheel press, 60-ton W. S., 34"x54".
Send us your inquiries.

USED AND REBUILT MACHINERY

FOR SALE BY

United Machinery & Supply Co., 1241 Walton Ave., St. Louis, Mo.

Brake, 12' 14 ga.
Drill grinder, Yankee.
Flanger and circle cutter, Niagara.
Hammers, 25 to 100 lbs.
Keysater, No. 2 M. & M.

Lathe, Barnes, sliding bed.
Lathe, 18x10 L. & S., s. p. d.
Punch, 4" in 8", 20" thr., m. d.
Shear, throatless, 10 ga., m. d.
Shear, power, 10' 15" ga.

FOR SALE BY

**Victor Machinery Co., 128 S. Clinton St., Chicago, Ill.
Phone ANDover 4299**

Drills, 20" Barnes camel bk., m. d. (2).
Eyelet machines, Model B, United.
Hammers, No. 4 Black & D., port.
Lathe, 27x60 Prybil. gap spinning.
Lathe, 11x4 New Monarch, s. q. c.
Lathe, 11x4 South Bend, t. a., q. c.

Presses, No. 57 Niagara, tierod, f. t.
Presses, No. 5 L. J., back grd., (2).
Shear, No. 552 Niagara, 15" gap.
Spinners, No. 103 Grant, m. d.
Spinners, No. 80 Grant.
Spot welder, 10 k. w. Federal.

FOR SALE BY

**The Elyria Belting & Machinery Co.,
Corner Williams and Buckeye Streets, Elyria, Ohio**

Buffer, electric, 3 h. p. Hisey-Wolf.
Grinders, 3 h. p. Dillon Electric, 3 phase, 49" between wheels.
Hoist, 1-ton Reading Electric, 3 phase, 220 volt.
Lathe, 36"x14" American Tool Works, s. b. g.
Press, 6-I Cleveland Punch & Shear Works, 3" stroke, max. 4".
Punch press, No. 20 Bliss Inclinal, 2" stroke.
Punch press, No. 55 Toledo, s. s., 16" stroke.

FOR SALE BY

Geo. M. Bernstein & Co., 225 No. Elizabeth St., Chicago, Ill.

Bolt cutter, 1 1/2" Reliance.....	\$ 95.	Miller, No. 3 Kemp. plain.....	\$285.
Bolt cutter, 2 1/2" Nat. 37 sts. ds.	245.	Pipe machine, 4" Stoeber.....	90.
Drill, No. 2 Colburn Mfg. h. d....	175.	Planer, 30"x24"x6" Rockford...	145.
Drill, No. 4 Colburn Mfg. h. d....	250.	Riveter, 4-A high speed.....	135.
Drill press, 20" Superior.....	27.	Screw mch., No. 2G-B & S auto.	375.
Gear hobber, No. 3 B-C.....	250.	Screw press, 20 ton Stecher.....	115.
Lathe, 16"x8" South Bend gap...	165.	Shaper, 13" Smith & Mills.....	95.
Miller, No. 1 Kemp. univ., v h.	375.	Tapper, No. 2X Garvin.....	80.
New 4 Jaw Independent Lathe Chucks,	3" \$3.50, 4" \$4.50, 5" \$6.50, 6" \$8.00.		

FOR SALE BY

Brown-Morris Co., 2950 E. Woodbridge St., Detroit, Mich.

2A Warner & Swasey Turret Lathes, latest type, (2).
2A Warner & Swasey Turret Lathes, factory rebuilt, (2).
These machines are equipped with chucks, guards, taper attachments, slide tools and flanged tool holders. They are in perfect condition and have had less than six months service since leaving the Warner & Swasey Factory.
No. 10 Brown & Sharpe External Grinders. A-1 condition, (2).
16" American Shaper.

These machines are all motor drive and include automatic starters, push button control and line switches. All motor equipment 220 volt, A. C., 60 cycle, 3 phase.

The above is surplus equipment offered for sale by the finest equipped Jig & Fixture Shop in the Middle West.

USED AND REBUILT MACHINERY

FOR SALE BY

First United Finance Corporation, 215 W. Randolph St., Chicago, Ill.

Automatic screw machines, Brown & Sharpe No. 00, 0, 2 and 19, Serial Nos. 1000 to 7000	\$90 to \$375.
Automatic screw machines, Brown & Sharpe high speed, No. 00, 0, and 2, Serial Nos. 6000 to 11,500	550. to 800.
Gear hobber, B. & S. No. 6, 72"	1800.
Grinder, No. 2 Reed surface, magnetic chuck	275.
Lathe, 12"x5' Hendey, q. c. g., draw bar, chuck, 10 collets	275.
Lathe, 14"x6' Hendey, q. c. g., draw bar, chuck, 16 collets	375.
Miller, No. 1 1/2 B Milwaukee special Universal, vertical head, 5 h. p. direct motor connected	900.
Radial drill, Bickford 4	300.
20 Lathes from 14"x6 to 38"x32'.	

FOR SALE BY

Joseph Hyman & Sons, 2600 E. Tioga St., Philadelphia, Pa.

Stamping Press Specialists. 1200 Presses In Stock.

GAP FRAME DOUBLE CRANK PRESSES

No. 21 Bliss, flywheel, bed 34"x9", opening in back 23", wgt. 4100 lbs.	
No. 23-D Bliss, flywheel, bed 72"x21", opening in back 60", wgt. 13,000 lbs.	
No. 24-B Bliss, grd., tie rod, bed 55"x14", opening in back 42", wgt. 16,000 lbs.	
No. 203-D Toledo, grd., bed 82"x13", opening in back 43", wgt. 10,600 lbs.	

KNUCKLE JOINT EMBOSSEING PRESS.

No. E-52 Ferracute, 150 tons pressure, width bet. uprights 13", wgt. 7000 lbs.	
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AUTOMATIC DROP PRESS.

No. 2 Standard, 200 lb. belt lift, gap frame, 4 poppets, wgt. 4300 lbs.	
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FOR SALE BY

Reliance Machinery Sales Company

1405 Brighton Road, N. S. Pittsburgh, Pa.

Car wheel borer, 42", (cheap).	Punch, Whittemore comb. 8" thru 8"
Gang slitter, Yoder, 48"x1 1/2", m. d.	Punch, horizontal No. 2 H. & J., 1"
Gang slitter, Braddock, 36"x18 ga. md.	thru 1", motor drive.
Hammer, 100 lb Beaudry upright.	Saw, metal band, 10"x10" Napier.
Hammer, 10,000 lb. Chamb. st. drop.	Shear, squaring, 10"x12 gauge.
Elect. crane 10 t. P. & H. 56" sp. 220 v.	Shear, plate, 6"x1" H. & J. turntable.
Press, No. 39 Bliss horn. sw. table.	Shear, 8"x8"x1 1/2" H. & J. dbl. angle.
Planer, rotary, 50", on turntable, m. d.	Shear, 6"x6"x1" H. & J. dbl. angle.
Punch, 12" Bertsch, 4"x4", m. d.	Shear, Wangler Rotary bevel, 4" cap.
Punch, 48" Beatty, 1" thru 1", m. d.	Straightening & bending mch., hor.

FOR SALE BY

McDonald Machinery Co.,

Bolt mchs., Landis & Acme 1 1/2".
Boring mill, Lucas & Bul. hor. & vert.
Brake, D. & K. 6' 10 gauge, power
Drills, Cin-Bickford 3' & 3 1/2' radials.
Gear hobber, G. & E. 24" & 60".
Grinders, B. & S. No. 2 surf. & univ
Grinders, P. & W 14" vert. surf. b. b.
Keyseaters, M. & M. No. 2.
Lathes, Hendey 20"x10', 14"x8' &
20"x12' grd. hd.: 50 others in stock.
Milling machines, B. & S. No. 5, vert.
Milling machines, Van Norman
No. 2 duplex; B. & S. No. 1 1/2 Cinc.
No. 1 1/2, Hendey No. 1-B, Kemp.

1535 N. Broadway, St. Louis, Mo.

No. 3; Ohio No. 29 B. & S. No. 2-A
single pulley drive, all universal;
Kemp. No. 1, LeBlond No. 3-H;
B. & S. No. 3-B, s. p. d., all plain,
Cincinnati 18" automatic.
Pipe mchs., Curtis, B. & K. 12" m. d.
Punch presses, Bliss No. 20; Bliss
No. 21 1/2. Rob. No. 2 1/2 grd., o. b. i.
Screw machines, Foster No. 7.
Shapers, G. & E. S. & M., Cin., Ohio,
Steptoe, Queen City, 12", 16", 18",
20", 24" and 26".
Square shears, Niag. 62" 18 ga., pwr.
Turret lathes, W. & S. No. 2A univ.

High Grade Machine Tools

Lathes

Rivett Precision Lathes, like new.
 54"x24" H. S. & G. Grd. Hd. M. D.
 42"x24" American Grd. Hd. late type.
 24"x22" Bradford, Q. C., 3 S. C. D.
 46"x16" H.S. & G. Grd. Hd., late type
 24"x12" L. & S. Patent Grd. H.S.P.D.
 30"x10" Lodge & Shipley, 3 S. C. D.
 O. B. G. Q. C.
 20"x8" Am. Grd. Hd., M. D., late t.
 18"x8" Reed-Prentice Grd. Hd. Q. C.
 20-30"x7" Monarch Helical G.H. Gap
 16"x6" Lodge-Shipley Sel. Grd. Hd.

Grinders

Nos. 50, 55, 60, 65 and 70 Healds.
 6"x18" Landis Plain, Self Contained.
 No. 11 Brown & Sharpe Plain.
 Walker Single Stroke Surface Grinder.
 10"x52" Landis Plain, Self Con.
 Rivett Internal Grinder.
 12" Pratt & Whitney Surface.
 No. 2 Bath Universal Grinder.
 No. 2 Brown & Sharpe Surface.
 Nos. 1 1/2 Cincinnati Tool & Cutter.
 No. 3 Brown & Sharpe Universal.
 No. 13 B. & S. Universal Tool Room
 Grinder, complete equipment.

Gear Cutters

No. 4-48" Brown & Sharpe.
 No. 12 Barber-Colman Hobber, dbl.
 overarm, late type
 No. 13 B. & S. Bevel and Spur.
 18-H Gould & Eberhardt Hobber.
 6", 11", 18" Gleason Gear Generators.

Bolt and Pipe Threaders

1/2" Landis Double-Spindle.
 1 1/2" Landis Sgl.-Sp., Grd. Hd. m. d.
 1" Acme Class "A" Single-Spindle.
 2" Landis Sgl.-Sp., lead screw attach.
 2" Landis Double-Spindle.
 6" Oster Pipe Machine, motor drive.

Boring Mills

24"; 36" and 42" Bullard "New Era"
 A. C. motor drive.
 60" Niles Boring Mill, 2 heads.
 84" Niles Vertical, motor drive.
 No. 32 Ciddings & Lewis Horiz.

Milling Machines

No. 2 Van Norman Duplex Miller.
 No. 4 Cincinnati H. P. Pl., S. P. D.
 No. 4-A Brown & Sharpe Universal.
 No. 3-A Brown & Sharpe Universal.
 No. 3 Cincinnati, Plain.
 Nos. 3; 5-B; 6 Becker Vertical.
 No. 3 Cincinnati Vert. H. P., S.P.D.

Nos. 2 and 3 Cincinnati High Power
 Plain. S. P. D. flange nose
 No. 2 Cincinnati Universal H. P.
 flange nose; S. P. D.
 5" Pratt & Whitney Automatic.
 18" Cincinnati Plain Mfg. Miller.
 18" Cincinnati Automatic, M. D.
 24" Cincinnati Automatic, M. D.
 No. 33 Kempnith Automatic.
 No. 3 Rockford Rigidmil; 98% new.
 No. 30 Sunstrand Rigidmil; Hydraulic
 Feeds; brand new.
 No. 7-H Becker Lincoln type.
 No. 1 Knight Miller and Driller.
 No. 3 & 3-E Lees-B. Thread Millers.

Planers

24"x24"x8" Gray Planer.
 27"x27"x8" Woodward & Powell.
 36"x36"x10" Gray, 2 heads.
 26"x26"x12" Whitcomb-B., 2 heads.
 36"x48"x12" Liberty Openside; two
 rail heads. One side head.

Radial and Upright Drills

4" and 5" American Triple Purpose.
 3 1/2" American Triple Purpose, M. D.
 No. 2 Colburn Mfg. H. D. 2-spindle.
 3-sp. Avey High Speed Ball Bearing.
 6-spindle Rockford 20" B. G. P. F.
 No. 40 Nateco Straight Line Multi.

Shapers

16", 20", 24" G. & E., mtr. dr. thru g. b.
 16", 20" and 24" G. & E., cone drive.
 20" Steptoe, S. P. D.
 24" Potter-Johnson M D. thru gear box
 24" Cinti. h. d. mtr. dr. thru gear box.

Miscellaneous

No. 2 Klemm Metal Band Saw.
 No. 3-B LaPointe Broaching Mche.
 25 ton Henry & Wright Dieing Mche.
 50 ton Henry & Wright Dieing Mche.
 80 lb. Bradley Cushion Helve Hammer
 Nos. 0 and 3 Baker Keyseaters.
 Nos. 1 & 2 Davis Keyseaters.
 6 spindle 1/2" Acme Nut Tapper.
 No. 5 Toledo O. B. Incl. Presses.
 No. 43 Robinson Dbl. Crank Geared
 Press.
 No. 50 Toledo Arch Press, 10" stroke.
 Wickes Punch & Shear, 48" throat,
 1 1/4" thru 1 1/4".
 High Spd. Riveters; 1 1/2"-B; & 3-AH.D.
 No. 2 Garvin Vertical Tapper.
 No. 4 W. & S. Univ. Turret Lathe.
 100 K. W. Federal Butt Welder.
 Shuster Wire Machines; 3/16" & 1/2".

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Modern Machine Tools

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No. 72A3 Heald Aeroplane Cylinder.
No. 60, 65 Heald Cylinder.
No. 70, 75 Heald Internal.
Capital B. B. Internal.
Rivett Internal.
No. 1 Morse Plain Cylindrical.
6x32" Norton Plain Cylindrical.
No. 11 Brown & Sharpe Plain Cylind.
10x24, 10x30, 10x36, 10x52, 12x36,
16x52" Landis Plain Cylindrical.
12x72" Norton Plain Cylindrical.
16x48", 16x68" Landis Crankshaft.

No. 3 Gardner M. D. Polishing Stand.
No. 8—40" Gardner Disc.
No. 51 Besly M. D. Disc.
No. 120 Gardner Pl. & Comb. Disc.
Springfield Swinging Frame Emery.
No. 2 Brown & Sharpe Auto. Surface.
No. 2 Diamond Auto. Surface.
No. 2 & 3 Wilmarth & M. Auto. Sur.
14" Pratt & Whitney Vertical Surface.
No. 22—12" Heald Rotary Surface.
No. 1½, 2 Cin'ti Univ. Tool & Cutter.
No. 1, 2, 3, 4, 13 Brown & S. Univ.

PRESSES

No. ¾ Verdin O. B. I.
No. 1, 3 Consolidated O. B. I.
No. 3, 5 Michigan O. B. I.
No. 3, 4, 5 Toledo O. B. I.
No. 4 Robinson O. B. I. Geared.
No. 4A, 5A Willard O. B. I.
No. 4, 6 Perkins O. B. I.
No. 6 Waterbury-Farrell Double Cr.
No. 11, 12 Toledo Horning.

No. 20 Bliss O. B. I.
No. 21, 23 Bliss Horning.
No. 32P, 33 Toledo Upright.
551 Ferracute Double Crank.
No. 83C Michigan Double Cr. Grd.
No. 90E, 91D Toledo Double Crank.
No. 206B Toledo Gap, Bed D. C. Grd.
No. 2, 3 Geier Straightening Presses.
150 ton Elmes Hydr. Tire Forcing Press

ENGINE LATHES

12"x6" LeBlond, cone head.
14"x6" American, cone head.
14"x6" Hendey, cone head.
14"x6" Lodge & Shipley, cone head.
16"x6" Cinco, cone head.
16"x6" Greaves-Klu man, cone head.
16"x6" Hendey, geared head.
16"x8" American, geared head.
16"x12" American, cone head.
18"x8" American, geared head.
18"x8" Hendey, cone head.
18"x8" Lodge & Shipley, select. head.

19"x10" LeBlond, cone head.
20"x8" Hendey, geared head.
20"x8" American, geared head.
24"x10" Greaves-Klu man, cone hd.
24"x16" Lodge & Shipley, cone head.
27"x16" American, geared head.
30"x14" Lodge & Shipley, cone head.
36"x16" Boye & Emmes, cone head.
36"x20" Bridgeford, geared head.
36"x28" American, geared head.
36"x40" American, geared head.

TURRET LATHES AND SCREW MACHINES

No. 3L Gisholt Turret, m. d.
13", 21", 24" Gisholt Turret.
2½x11" Cincinnati Acme Turret.
2½x24" Jones & L. Flat Tur., m. d.
3x36" Jones & Lamson 2 Spdl Tur.
3½x36" Acme Geared Head Flat Tur.
3½" Gridley Single Spindle Auto.
14" Fay Automatic, belt drive.

18", 26" Libby Turret.
24" Steink H. D. Turret.
No. 2, 4 Foster Turret.
No. 2, 4, 6, 8 Warner & Swarey Tur.
No. 2A, 3A, 4 W. & S. Univ. Tur.
No. 5A, 6A Potter & Johnson Auto.
No. 22, 23, 24 New Britain Auto.

MILLING MACHINES

No. 2, 3, 4 Cincinnati Plain, cone.
No. 2, 3, 4 Cincinnati Plain, s. p. d.
No. 2, 3, 4, 5 Cin. Plain, rect overarm.
No. 2, 3 Cincinnati Universal, cone.
No. 3 Cincinnati Universal, s. p. d.
No. 2, 3, 4 Cincinnati Vertical, s. p. d.
24", 48" Cincinnati Plain Automatic.

18", 24", 48" Cincinnati Duplex Auto.
No. 1½ Brown & Sharpe Univ., cone.
No. 2B, 2BS, 3B Milw. Pl., dbl. over.
No. 1½B, 2½B Milw. Vert., m. d.
No. 3 Ohio Universal, cone.
No. 21 Brown & Sharpe Automatic.
No. 33 Kempsmith Production.

MISCELLANEOUS

Hack saw, No. 20C Racine shear cut.

Die sinker, No. 2, 3 Pratt & W., belt.

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UPSETTING and FORGING MACHINES: Latest Type, 1" Ajax, with overhanging slides. Other Upsetting and Forging Machines; Ajax, Acme and National, $\frac{3}{4}$ " to 5".

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QUADRUPLE COMBINATION ALL STEEL PUNCH, SHEAR, BAR, ANGLE, TEE CUTTER AND NOTCHER, punch 1-1/16" thru $\frac{5}{8}$ "; shear angles $4x4x\frac{1}{2}$ ".

TESTING MACHINES: Riehle 100,000 lbs., 2-screw Tensile, M. D., with several sets grips; Brinnell 4500 kg.; Scleroscopes.

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COULTER & MCKENZIE 6" single Pass Eye Back Machine.

STRAIGHT SIDE TRIMMING PRESSES.

OPEN BACK INCLINABLE PRESSES: Plain and geared, from No. 0 Bench Type to No. 6.

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ARC WELDER: 300 Amp. cap. BUTT WELDER: 30 K. W. cap.

BOLT MACHINERY

COLD HEADERS: Waterbury and Manville, single and double stroke, solid and open die, $\frac{5}{16}$ " to $\frac{5}{8}$ ".

1" NATIONAL SEMI-HOT AUTOMATIC FEED HEADER.

HOT HEADERS: Stop and Continuous Motion, all sizes.

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NUT BURRING MACHINES: National, $\frac{3}{4}$ " to 2".

AUTOMATIC SCREW SLOTTER: Waterbury $\frac{1}{4}$ ".

THREADING MACHINES: Single and Double Spindle from $\frac{1}{2}$ " to 3".

COMBINED POINTERS & THREADERS: Landis, Economy, Cooke.

THREAD ROLLERS: Waterbury and Manville, $\frac{1}{4}$ " to 1".

GIMLET POINTERS.

TAPPERS: National Automatic Bent Tap, $\frac{1}{4}$ " to $\frac{1}{2}$ "; Acme and National 6 and 8-spindle, $\frac{1}{2}$ " to 2".

HOMO ELECTRIC FURNACE.

CARBONIZING FURNACE: No. 85A American Gas.

MACHINE TOOLS: 24" G. & E. High Duty Shaper, arr. for M. D.; 24"x12" and 28"x12" Lathes; 24x24x6" Planer; No. 2 Cincinnati Milling Machine; Oliver Die Filing Machine; LaPointe Keyseater; Drill Presses; Hack saws; miscellaneous equipment.

MISCELLANEOUS: Pease Electric Blueprinting Machine No. 10A; Forging and Tapering Rolls; Pipe Threaders 4" to 12"; Roller Pipe Cutter Tumbling Barrels of various makes and sizes; Forging Furnaces; Air; Compressors; Blowers; Hydraulic Presses; Riveting Machines; Wire Straighteners from 3/16" to $\frac{5}{8}$ "; complete Parkerizing Unit.

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Shop No.

MILLING MACHINES

- 50617—60"x42"x16' Ingersoll Planer Type, Ser. No. 3547, adj. rail, hvy. duty pl. hds., 5' milling spdis., dir. m. d., width bet. hous. 60", length of table 18', width 55"; length bet. oil pockets 16', direct con. to 30 h. p. G. E. motor, 2-phase, 60 cycle, 220 volt, 900 r. p. m.
- 50618—No. 2207 Kearney & T. Bridge Type, Vert. Milwaukee-Mil, vert. hd., 7" sp., di. t. between hous. 52", tbl. 22"x11", length bet. pockets 94"; motor in base, push button con.; micrometer dial stops for vert. spdle.
- 50666—No. 5 Cinti. Hor., slotted nose, round overarm, s. p. d., vert. attach.
- 50613—No. 4 Kempsmith Vert. Maxi-Miller, ser. No. 10102, s. p. d., tbl. 14x66".
- 8063—No. 3 Cinti. Univ., c. p. dr., Serial No. A-1217F, div. hds., vert. att.
- 50615—No. 3 Cinti. Pl., s. p. d., vert. att., & rot. tbl. 13 3/4"x59", rect. overarm.
- 50612—No. 2MCinti. Hor. pl., ser. No. B-112-Q, s. p. d., tbl. 10 1/2"x53", rect. overarm.
- No. 1 Brown & Sharpe Plain, 4 step cone, with vise and c. s.

BORING MILLS

- 5012—14"—20' Niles vert. Kxt. Type, 2 swivel hds. on rail, table 10' dia. 8" thick, ext. blocks, chuck jaws, etc., b. d., 6 step cone, friction feed.
- 51010—51" Bullard New Era Vert. Tur. Lathe, serial No. 11502, 4 jaw Univ. chuck table, forming attachment with cams.
- 51011—42" Bullard New Era Vert. Tur. Lathe, Serial No. 11647, 4 jaw Univ. chuck table, threading attachment.
- 5113—64" bar Bement-Miles Floor Type Hor., 72" feed to boring bar, hor. travel of column 12', vert. travel of head 8", floor plate 14' 6"x16", outboard support, angle plates and boring bars; belt drive.

PLANERS

- 5032—72"x72"x22' Pond, 4 heads table 54" wide, dist. V to V 30", belt drive.
- 5031—48"x48"x14' Pond, 2 heads on rail.
- 5035—36"x36"x12' Cinti hvy. duty, pwr. rap. trav. 13' tbl., length between oil pockets 12', forced lub. to V's, pressure lub. to bed bearings, spray lub. to gear train; pump and filter box table; direct motor dr. with 15 h. p. Reliance reversing motor, 230 volt, variable speed, 250-1000 r. p. m.

RADIAL DRILLS

- 5079—6' American plain, fully encl. hd. dir. m. d. thru g. b. 20 h. p. West'se mtr.
- 60717—5' Cinti-Bick. Super-service Radial, 15" column, motor on arm, equip with electric locking device; purchased New 1930.

ENGINE LATHES

- 50112—60"x50' Pond, screw cut., tri. grd., face plate dr., 8" hole in spdl., dist. bet. centers 40", sw. over saddle 44", compl. with chuck jaws, steady rests, counter-shafts, etc.
- 20"x8' Hendey, t. att. comp with chk. face plate, stdy. & follow rest, c. s.

TURRET LATHES

- 50213—26" Libby, sgl. pul. dr., screw cut., 4 1/2" hole thru spdl., fully equip.
- 5020—18" Libby, s. p. d., screw cutting 3 1/2" hole thru spindle, fully equip.
- 50217—No. 1A W. & S. Ser. No. 238397, equip. for bar and chucking work, power feed to turret and cross slides.
- 50210—2"x24" Jones & Lamson, steel head.

GRINDERS

- 6153—14"x136" Norton plain, belt drive.
- 81512—No. 13 B. & S. Univ., complete internal grinding attachment.
- 8157—Gisholt Universal Tool, Serial No. 1182, cup wheel.
- No. 2 Diamond Auto. Sur., table 16"x36" mag. chuck & gen., b. d. c. s.

PRESS

- 5321—200-ton Watson-Stillman Hydraulic Wheel, 8 1/2" ram, strongback.

SHAFT STRAIGHTENER

- 5131—Niles-B.-P. Shaft Str. Mche., toggle oper., 7" str., 2 sets of str. rolls, each 18' long on each side of mche., dir. m. d., 5 H. P. West. motor.

KEYSEATER

- 6161—No. 26 Taylor & Fenn, table 8"x42".

(Continued on Next Page)

GEAR HOBBER

5695—No. 44 Brown & Sharpe spur & spiral gears, 20" dia., 10" face, No. 3 pitch, single pulley drive, Serial No. 65.

AIR COMPRESSORS

0393—15"x9½"x12" Worthington-Laidlow feather valve type, Ser. No. 25199, h.m.dr. to 100 h. p. G. E. mtr., 2 ph., 60 cy., 220 v., 720 r.p.m., Type IQ-10.
0391—10"x10x16"x10" Ingersoll-Rand, Serial No. 39078, belt m. d. to 50 h. p. Westinghouse motor, 2-phase, 60 cycle, 220 volt, 500 r. p. m.

ROTARY CONVERTERS

0268—50 k.w. West'ce, 250v., 200 amps., 2-ph., 60 cy., 1800 r.p.m. Ser.No. 1319570.
0287—50 k. w. West'ce, 250v., 200 amps., 2-ph., 60 cy., 1800 r.p.m., Ser.No. 1319519

CRANES

5222—20-ton Morgan Electric Trav., 50' span, 5 motors, 2 10-ton trolleys.
5223—10-ton Northern Electric Traveling, 50' span, 3 motors, single trolley.

DRILL PRESSES

60715—2 spindle Henry & Wright Sensitive Class K, Serial No. B-24134.
60716—1 spindle Henry & Wright Sensitive Class K, Serial No. A-23295.
2—24" Sipp H. S. Sensitive, belt drive, table 24"x24".
16" Sipp H. S. Sensitive, belt drive, table 16"x24".

SHAPERS

2—24" G. & E. s. p. d. thru gear box—d. b. g. with vises.
24" Stockbridge belt drive with vise.
20" Gould & Eberhardt, belt drive, d. b. g. with vise and c./s.
16" Gould & Eberhardt, d. b. g., b. d. with vise and c./s.

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14' Niles Bement Pond.	54' Colburn.
72' King.	54' Bullard New Era Type.
72' Gisholt.	42' Bullard New Era Type.
60' Gisholt.	36' Bullard New Era Type.

All above arranged for constant speed m. dr. Each machine has P. R. T.

MILLING MACHINES

No. 4 Cincinnati Universal.	No. 5 Cincinnati Plain.
No. 3 Cincinnati Universal.	No. 4 Cincinnati Plain.
No. 2 Cincinnati Universal.	No. 3 Cincinnati Plain.
Nos. 4, 3, 2 Cincinnati Vertical.	No. 2 Cincinnati Plain.

All millers arr. for constant speed motor drive Geared Head. P. R. T.

LATHES

60"x35' Bed Niles Bement Pond.	24"x14' Lodge & Shipley.
48"x28' Bed Niles Bement Pond.	20"x10' American.
36"x14' American.	16"x8' Lodge & Shipley.
27"x16' American.	

All Geared Head. Arranged for constant speed motor drive.

RADIAL DRILLS

6' American Triple Geared.	3' Cincinnati Bickford.
4' Cincinnati Bickford.	

BORING MILLS HORIZONTAL

No. 32 Lucas, 3¼" Bar.	4½" Bar Universal.
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Precision Types, Single Pulley Drive.

Have in stock. Power Presses. Shapers. Planers. etc.

MISCELLANEOUS

120"x96"x20' Cincinnati 4 head Planer, Forced Feed Lubrication Mtr. Dr.
No. 16 Blanchard vertical Surface Grinder, motor in spindle.
96" Gould & Eberhardt Gear Hobber for Spur & Bevel Gears.

Sun Machinery Company, Inc. 49 Van Buren St.,
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BORING MILLS

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| 10' Betts Vertical, rapid traverse,
grd. feeds, motor dr., 3-motors. | 24" Bullard, New Era, M. D. |
| 36" Bullard, New Era, M. D. | 3½" bar Universal, Horizontal.
No. 40 Landis, floor type, M. D. |

DRILLS

- | | |
|-------------------------------|-----------------------------------|
| 22" Barnes, All Geared, M. D. | 4' American, pl., gear box, m. d. |
| 28" Cincinnati Gear Box T. A. | 6' American, plain, motor on arm. |
| No. 121 Baker, Single Pulley. | 6' American, pl., gear box, m. d. |

SHAPERS

- | | |
|----------------------------------|----------------------------------|
| No. 14 Cochrane-Bly Univ. s.p.d. | No. 1-M Cincinnati Univ. SPD. |
| 15" Potter-Johnston, Universal. | No. 2A B. & S. Univ. MD in base |
| 24" Milwaukee, cone. | No. 2 Cincinnati Plain, s. p. d. |

MILLERS

MISCELLANEOUS

- 48"x48"x26' Cincinnati Planer, four heads, gear box, motor drive.
120"; 72"; 60"; and 52" Niagara Power Squaring Shears, all m. d.

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| 14"x6' Monarch, quick change. | 17"x 8' LeBlond, quick change. |
| 16"x8' Hamilton, quick change. | 24"x14' LeBlond. |

TURRET LATHES and SCREW MACHINES

- | | |
|---------------------------|---------------------------|
| Automatic, National-Acme. | 2"x24" and 3"x36" J. & L. |
| 1½" cap. Smurr & Kamen. | 1" Pratt & Whitney. |

SHAPERS

- | | |
|----------------------------|----------------------------|
| 14" Niles, traveling head. | 24" Rockford, back geared. |
|----------------------------|----------------------------|

DRILLS

- | | |
|--------------------------------|-----------------------|
| Baush No. 1, multiple spindle. | 6' ceiling. |
| 32" Hofer, sliding head. | 44" Stover sensitive. |

MILLING MACHINES

- | | |
|------------------------|---------------------------|
| No. 1½ American plain. | 18" Cincinnati automatic. |
| No. 25 Becker plain. | No. 5 Becker vertical. |

MISCELLANEOUS

- | | |
|----------------------------|-----------------------------------|
| Band saw, Clark, compound. | Sand Blast, Boland. |
| Band saw, Napier 10"x10". | Shear, Loy & Nawrath ¾" cap. 10'. |
| Gear miller, No. 1 Bilton. | Shear, Pettingell, 60" throat. |

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MACHINERY Dept. H. COMPANY
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Every Machine Guaranteed

Boring Mills, 36" Bullard New Era;
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Boring Machine, No. 3-A Universal,
No. 32 Lucas; No. 5 Defiance.
Drill (B.B.) L. land Gifford, Allen,
Avey H. & W., 1 to 6 spindles.
Drills (Radial), 24", 5', 6' American;
5' Carlton; 6' Western.
Drills (Mfg.), Nos. 2, 4, 5 Colburn;
No. 10 Moline; No. 17 Foot-
Burt; Nos. 12 & 14 Natco 22-sp.
Gear Cutters, No. 12 Barber Colman;
No. 6 Fellows; 36-H G. & E.;
6" and 18" Gleason.
Grinders, 6x32, 10x36 Norton, 20x120,
26x96 Landis; No. 10, 16", No.
16, 30" Blanchard, No. 70,
No. 22 Heald; No. 33 Abrasive;
No. 10 Brown & Sharpe.
Lathes, 16x8, 20x10, 24x12, 30x12,
36x22 Lodge & Shipley; 14x6,

20x12 American; 26x16 Bridge-
ford; 66x36 Putnam.
Millers (Plain), No. 1-B, No. 2-B,
No. 3-B Milwaukee; No. 2,
No. 3, No. 4 Cincinnati.
Millers (Vert.), No. 4 B, No. 6 Becker,
No. 2, No. 3, No. 4 Cincinnati.
Millers (Mfg.), No. 3 Sundstrand
Rigidmill; 18", 24", 48" Cin-
cinnati; 33 Kemp Smith.
Planers, 24x6, 24"x12" Gray, 36x18,
56x16, 72x10 Cincinnati.
Presses, No. 20 Bliss, No. 3 Rockford
No. 4 Federal No. 545 Hamilton
Shapers, 24' & 32" Gould & Eberhart;
24" Cincinnati; 20" Hendey.
Turret Machines, No. 1-A, No. 2-A,
No. 4-A Warner & Swasey;
18", 26" Libby; No. 5-A, and
No. 6-A Potter & Johnston
24" Gridley; 54" Cleveland.

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HILL-CLARKE MACHINERY CO.
645 W. Washington Blvd., Chicago, Ill.

Boring Mills and Planers At Reduced Prices

22"x22"x5" Putnam Planer, one head, c. s. drive.
32"x32"x6" Gray Planer, one head, c. s. drive, completely overhauled.
36"x36"x12" Pond, 2 heads, with variable speed reversing motor drive.
36" (widened to 60") x14" Gray Spiral Planer, 2 hds., auxil. slide, belt dr.
38"x48"x10" Pond Planer, 2 heads, c. s. drive.
42" (widened to 54") x42" high x16" Gray practically new Maxi-Service
Planer, 2 heads on cross rail, 2 side heads, table widened to 50",
direct connected reversing motor drive with motor and generator.
50" Bullard Vertical Boring Mill, 2 swivel heads, t. & l. pulley drive.
52" Bullard Vertical Boring Mill, 2 swivel heads, arranged for motor dr.
52" King Vertical Boring Mill, 2 swivel heads, 10 H. P. motor.
60" Colburn Vertical Boring Mill, 2 swivel heads, belt drive.
3" Bar Fossdick Horizontal Boring Mill, single gear box drive.

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CLEVELAND, OHIO DETROIT, MICH.

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Russell Machine Co., 1447 Oliver Bldg., Pittsburgh, Pa.

55" Bement Rotary Planer, m. d.
B-2 Nazel Hammer, M. D.
72" N. B. P. Ver. Boring Mill, m. d.
Radial Drills, 2' and 3'.
16"x8' Monarch Lathe, complete.
Oster Pipe Machine, cap. 1 1/4" to 6".
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5/8	11	18	.30
11/16	11	16	.30
3/4	10	16	.35
13/16	10		.35
7/8	9	14	.40
1	9		.40
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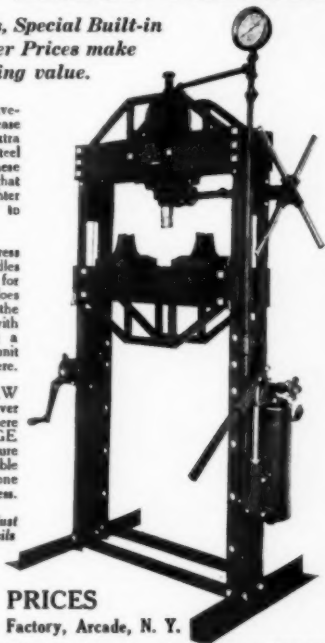
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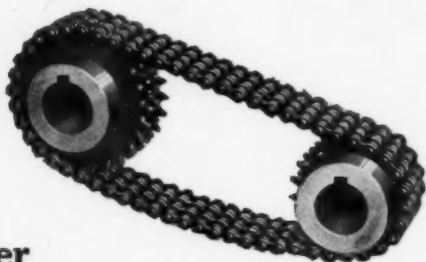
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